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1.	The product	tion of ga	soline, October	, 1951	4392	tons	
	during Oct	tober, 1951 g of 2,056	tons for stock	s held	4618	"	
	in Riesa,	and 2,562 )	delivered dire	ct to the			
		gasoline h	eld at Schwarzh er, 1951	eide	8136	n	
2.	Attachment	"A" is a	ietailed descri	ption of the	process.		
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CENTRAL INTELLIGENCE AGENCY	
ATTACHMENT A	
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The Schwarzheide Plant

50X1-HUM

## 1. The process

The Schwarzheide plant is using a pressureless method, based on the Fischer-Tropsch process, and is producing various kinds of fuel. This production method, which, in normal atmospheric conditions, does not involve the use of pressure, is also called the Kokasin process. The process has been developed from the technical methanol synthesis. As in the case of the Methanol process, its principle is to bring about a total breakdown of the structure of the coal. Its main aim is the production of fuels, and not alcohols. The structure of the coal is broken down during the complete distillation of the coal in water generators. At a temperature of 170 to 190° C, liquid hydrocarbons are formed from the water gas through the double decomposition of carbon monoxide and hydrogen. For this double decomposition a catalyzer is necessary to bring about the formation of liquid hydrocarbon (kokasine). This process takes place in so-called contact furnaces. During this catalytic transformation, the acid is separated in the form of hydrogen. Mainly aliphatic hydrocarbons are produced during this process. The whole synthesis follows the formula:

 $CO + 2H_2 = CH_2 + H_2O$  (sic)

The products of this synthesis have a high paraffin content with predominantly straight molecular chains. They are marked by their great purity; in particular, they are completely free from sulphur. In general, the liquid part of the products falls within the limits of benzol boiling points. In addition, gas oils and paraffin are given off. Part of the initial synthesis is taken over at the production stage by Kombinat Friedländer \* which produces, apart from hard fuels of all kinds, electrode carbon which accrues naturally during the process. The brown coal from the Senftenberg area is suitable as raw material for processing under the Fischer-Tropsch synthesis at Schwarzheide.

## 2. The contact

The catalyst for the Fischer-Tropsch synthesis is composed of varying proportions of the following elements: cobalt, copper, manganese and "alkalisch" iron. \*\*\*

The varying percentages of these elements required for the formation of the catalyst are still kept a close secret. Whether or not the Fischer-Tropsch contact can be used for the so-called high-pressure hydrogenation process is not known but the contact used for the high-pressure hydrogenation 50X1-HUM process also contains "alkalisch" iron, at a pressure of up to 300 atm.

## 3. Miscellaneous

In general, it can be stated that the greatest emphasis in the Schwarzheide plant is laid on the production of chemically pure fuels. Furthermore, from time to time, at the demand of the Russian directors, the fuel is subjected to purification by means of a so-called leadening process. The normal octane count is almost always between 64 and 70. The gas oils, which are given off, are subjected, according to need, to processing into solvents or they are placed at the disposal of the industry for further use or processing.

ĸ	(SAG Synthese).	Kombinat	Friedländer,	Werk Lauchhammer	West	50X1-HUM
<b>*</b>	Comant:	Possibly	irea hydroxid	le.		50X1-HUM

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